

## CLAIMS

Having thus described the invention, what the inventors wish to secure via Letters Patent is:

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1. A method for providing synchronization of audio to video comprising the steps of:

processing a video signal to generate a video output comprising at least one time stamped acoustic identification of the content of the audio associated with the video signal;

processing an audio signal to generate an audio output comprising at least one time stamped acoustic identification of the content of said audio signal; and

synchronizing the video signal to the audio signal by adjusting at least one of the signals to align at least one acoustic identification from the video signal with a corresponding acoustic identification from the audio stream.

2. The method of Claim 1 wherein said synchronizing comprises applying a Viterbi algorithm to the signals.

3. The method of Claim 1 wherein said synchronizing comprising adjusting the audio signal to cause the acoustic identification from the audio signal to be aligned with the acoustic identification of the video signal.

4. The method of Claim 1 wherein said processing a video signal comprises the steps of:

extracting at least one image from the video signal;

detecting at least one feature in said at least one image;

analyzing the parameters of said feature; and

correlating at least one acoustic identification to the parameters of said feature.

5. The method of Claim 1 wherein each acoustic identification comprises an articulatory type.

6. The method of Claim 2 wherein each acoustic identification comprises an articulatory type.

7. The method of Claim 3 wherein each acoustic identification comprises an articulatory type.

8. The method of Claim 4 wherein each acoustic identification comprises an articulatory type and wherein said at least one feature comprises a facial feature.

9. A system for providing synchronization of audio to video comprising:

a video processing component for processing a video signal to generate a video output comprising at least one time stamped acoustic identification of the content of the audio associated with the video signal;

an audio processing component for processing an audio signal to generate an audio output comprising at least one time stamped acoustic identification of the content of said audio signal; and

a synchronization component comprising the video signal to the audio signal by adjusting at least one of the signals to align at least one acoustic identification from the video signal with a corresponding acoustic identification from the audio stream.

10. The system of Claim 9 wherein said video processing component comprises:

an extraction component for extracting at least one image from the video signal;

a detection component for detecting at least one feature in said at least one image; and

a processing component for analyzing the parameters of said feature and for correlating at least one acoustic identification to the parameters of said feature.